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"*NEC TENUI PENNA.*"

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EDITORS.

TREATMENT OF IRRITABLE BLADDER IN THE FEMALE BY FORCIBLE DILATATION.

BY DOUGLAS MORTON, A. M., M. D.

In the issues of the London Lancet for November and December, 1875, there appeared a succession of papers on this subject, prominent among which were two by Pridgin Teale and Christopher Heath, respectively. The degree of success attending the operation in the hands of these gentlemen has given it a respectable place among surgical methods.

"The cases calling for the operation," according to Teale, "are those in which there has existed for some months pain in the neck of the bladder and too great a frequency of micturition, with or without pus, mucus, or blood in the urine, or incontinence of urine, with a full bladder unable to empty itself completely, or with a nearly empty bladder, which is nearly intolerant of the presence of urine.

"The time for doing the operation is when all ordinary means of relief have been tried in vain, whether general or specially directed to the bladder, uterus, rectum, or kidney."

Although the inference from the tenor of each of the papers referred to is that the proportion of cases in which cure was effected was large, no data sufficiently definite to enable us to get at this proportion are furnished; and beyond the statement made by Mr. Teale, that pus from a source external to the bladder may cause distressing irritability of the organ (of which, of course, permanent relief can not be af-

forded by direct treatment of any kind), little light is thrown upon the question as upon what conditions depend success or failure. This is practically a most important question, and I hope here to contribute something toward its solution in the following conclusions drawn from my experience during the last year and a half. The number of my operations has been only eight, but to me they have been especially instructive.

1. The symptom in irritable bladder from any cause, vesical or extra vesical, is contraction of the thick band of muscular fiber encircling the neck of the bladder and the urethra. This is excited by contact of the urine with the mucous membrane in this part of the bladder, giving rise to constant uneasiness, but occurs with especial force immediately after micturition, causing severe pain. There is thus a parallel between the symptoms in this affection and those of anal fissure.

2. To paralyze this band of muscle by forcible dilatation will *invariably* prevent this spasmodic action, and thus remove for a longer or shorter time the source of the principal part of the suffering in these cases, and as a necessary consequence cause the subsidence of any irritability produced directly by it, and, superadded as it may be to that giving rise to the spasm. In one of my cases vesical irritability of considerable severity, giving rise to the usual symptoms—constant desire to pass water, and pain after micturition—was due to the presence of small hemorrhoids.* In this case, after a

* In this case the operation was done through error of diagnosis. The lady who was its subject had for fifteen years been suffering from frequent attacks of what had been called and treated for "inflammation of the bladder." For some time before coming under my charge her suffering

few days, the patient felt so far relieved as to pronounce herself cured by the operation. In another case the trouble was due to an anteфлекed womb; in a third case to abnormal pressure from a gravid womb.* In each of these cases forcible dilatation was followed by considerable relief, lasting several days. These facts not only sustain this conclusion, but show the value of the operation as palliatory in cases in which complete relief can not be hoped for. They teach also that in view of the difficulty we often find in affording any relief at all by ordinary means, that in many cases at least we ought not to be guided by Mr. Teale's rule of waiting till "all ordinary means of relief had been tried in vain."

3. It appears that in many cases chronic inflammation confined to the neck of the bladder and to the urethra, and occasionally accompanied by ulceration, may be the remains of more extensive acute cystitis fastened on to this part of the organ, and kept up by the irritant effect of constantly recurring spasm of the sphincter. In this class of cases paralysis of the muscle removes the whole cause of the continuance of the trouble, and we may expect permanent cure when the operation is properly done.

4. In one of my cases—and I believe it occurs frequently—the sphincter seemed to have regained its tone before the changes in the lesion necessary to complete cure had been effected, and so the cause was re-established. Dilatation repeated and done more thoroughly was followed by cure.

5. *Permanent* relief of irritable bladder can not, of course, be given by the operation when the trouble is dependent upon constitutional vice or abnormal or diseased

had been quite constant. She always referred her symptoms to the bladder, and, on being questioned closely, replied that she had never had hemorrhoids or any other anal trouble. Though the urine contained no pus, it had a large amount of mucus, and a vesical origin of her symptoms seemed very probable, especially as uterine complication had been excluded. Removal of the hemorrhoids, which I accomplished with ligatures, resulted in complete cure.

*This was a case of severe cystitis, in which the symptoms were such as to require that something should be done for temporary relief.

condition of the womb, rectum, or kidney. These conditions are, however, generally discoverable.

LOUISVILLE.

Correspondence.

To the Editors of the Louisville Medical News:

There is located at this place a physician who contends that he can cure any case of cancer. Now I claim that the profession is not in possession of any agent capable of removing the cancerous taint from the blood, and preventing the disease from manifesting itself locally; and that if a cancerous tumor is removed by the knife, or destroyed by caustics, that in the great majority of cases the disease will return. I also claim that if this doctor is in possession of any remedy that is a specific for cancer, that it is a duty he owes humanity, as well as the profession, to report the same to some medical journal. Please answer through the columns of the NEWS. CHAS. VAN WYE.

NORTH SALEM, LINN COUNTY, MO.

Dr. Van Wye expresses the generally accepted belief of the profession as to the prognosis in cancer. There are those, however, who believe in the curability of cancer by the internal administration of arsenic; and the writer is almost persuaded to believe that he has seen one case of cancer of the stomach thus cured.

As to the impropriety of a medical man employing a secret remedy, there can be but one opinion: it is in violation of the spirit and the letter of the Code of Ethics.

Art. I, "Duties for the support of professional character," paragraph 4, says: "It is derogatory to professional character for a physician to hold a patent for any surgical instrument or medicine, or to dispense a secret nostrum, whether it be the composition or the exclusive property of himself or of others; for if such nostrum be of real efficacy, any concealment regarding it is inconsistent with beneficence and professional

liberality; and if mystery alone give it value and importance, such craft implies either disgraceful ignorance or fraudulent avarice."

L. P. Y.

Reviews.

Ferns of Kentucky. With sixty full-page etchings and six wood-cuts. By JOHN WILLIAMSON. John P. Morton & Co. Price, \$2.

We heartily commend this beautiful and charming little book to the readers of the NEWS. Every physician should have some pleasant hobby with which to refresh and recreate himself in his moments unoccupied by professional work, and surely field-sports and field-studies are the best of all pastimes for him whose daily life is spent with sick people and books. Music, painting, chess, cards, any thing is better than all work and no play; but best of all is shooting or fishing or geologizing or botanizing—something to take one quite away from houses and people and printer's ink, and into the fresh air of the fields and forests and hills and valleys, where one reads only the handwriting and hears only the voices of Nature, and where his nostrils are regaled only by the pleasing odors of the flowers and the grasses and the trees.

Ferns—fern-hunting, fern-pressing, fern-culture—offer one of the least expensive and one of the most delightful of pastimes. One of the first families of the vegetable kingdom, and one of the most remarkable for variety and beauty, comprising twenty-five hundred known species; embracing in its folds plants esculent, medicinal, and poisonous; ranging in size from the gigantic tree-ferns of Australia, which rival the palm-trees in altitude, down to the tiny rock-fern not half a finger's length in height—there can be nothing more fascinating to lovers of nature than the study of these curious, canny plants, ferns.

Mr. Williamson's book is singularly practical. One may easily learn from its exquisite etchings and wood-cuts and its clear

descriptions the ferns of North America, for nearly all of the American species are described by the author. Doctors, the world over, are noted for their refinement and cultivation, and for their devotion to the various branches of natural history, and we predict for the Ferns of Kentucky an extensive sale to the medical profession.

L. P. Y.

Physics of the Infectious Diseases. By C. A. LOGAN, A. M., M. D. Chicago: Jansen, McClurg & Co. 1878.

A neat 12mo volume of two hundred pages (price \$1.50), written by the author during a four-years' sojourn in Chili. It is evidently the result of profuse thought, and is eminently original in matter. A single sentence will reveal its character. Says Dr. Logan: "Within that inscrutable something, which the author calls *vital gravitation*, and the *vital energy* in its most restricted sense, is to be found enthroned the secret of the *Life principle*, the mystery of *Generation*, and the wonders of *Distinct Species*." But lest this quotation be insufficiently luminous to convey a clear idea of the contents of the volume, we quote in addition the headings of some of the chapters. For instance, "The Earthquake under Medical Scrutiny;" "Hypothesis of the Contagious Bioplast;" "Hypothesis of the Infectious Molecule;" "Molecular Physiology;" "Concerning the Source of Energy." A Tropical luxuriance of theory and boundless speculation characterizes "Physics of the Infectious Diseases." Those metaphysical physicians who egotistically style themselves "medical philosophers" will be delighted with this book, and to this class of readers the author must look for patronage.

L. P. Y.

ENGLISH EARTH is the name given in America to terra alba or plaster of Paris, of which, according to an exchange, "tons upon tons are imported for the express purpose of adulterating white powders of various kinds, notably cream of tartar."

Miscellany.

THE ARTIFICIAL PRODUCTION OF HUMAN DISEASES IN THE LOWER ANIMALS.—W. L. Lindsay, M. D., F. R. S. E., in the London Lancet:

Among the modes by which tuberculosis has been artificially produced in the lower animals are the following: 1. By inoculation with tubercular matter (*a*) from the human lung, (*b*) from the cow, (*c*) from rabbits. 2. By inoculation with the sputa and blood of human phthisical patients. 3. By inoculation with non-tubercular matter. 4. By the use of various merely mechanical irritants, such as setons. 5. By feeding upon tubercular matter (*a*) from man, (*b*) from phthisical cows. 6. By feeding on the milk and flesh of phthisical or tuberculous cows or oxen. 7. By the inhalation of dried, expectorated tubercular matter reduced to fine powder. 8. By long confinement of cows in badly-constructed byres; that is, deficient in warmth, dryness, light, ventilation, and cleanliness. 9. By subjecting the same animals to excessive and prolonged lactation. 10. By in-and-in breeding of farm-stock. 11. By exposing in our menageries wild animals, accustomed to warm climates and forest-freedom and food, to such unnatural and pernicious influences as (*a*) cold, (*b*) sudden changes of temperature, (*c*) repression of freedom of action, including (*d*) defective exercise and the (*e*) non-gratification of the sexual or other instincts, along with (*f*) improper food and drink. 12. By subjecting our house-pets of all kinds to similar malign influences, including in addition (*a*) excess or deficiency of food and drink.

The animals in whom tuberculosis is producible by man, by some of the means above mentioned, include a considerable number of genera and species, represented by—1. Monkeys and other Quadrumana. 2. Dairy and other cattle, and the pig, goat, and sheep, among the Ungulata (or Ruminantia). 3. Rabbits and guinea-pigs, among the

Rodentia. Klebs describes them as "very susceptible to the artificial production" of tubercle. Burdon-Sanderson's experiments also showed that the Rodentia are easily affected with tubercle artificially inoculated, while other families of animals are unaffected. 4. Dogs and cats, among the Carnivora. 5. The porpoise, among the Cetacea.

Moreover, "animals of widely different species, and naturally not at all disposed to the disease, can be infected in the most serious manner." Curiously enough, however, tuberculosis is "all but unknown" in the horse, and probably in certain other animals.

Moreover, constitutional scrofula—the tubercular diathesis—is produced, and this diathesis is unfortunately, like so many other diseases both in other animals and man, hereditarily transmissible; so that deteriorated and deteriorating races or breeds of dairy-cows, for instance, are constantly being manufactured by ignorant men. This heredity is observed, in oxen, chiefly in connection with a development in them of the lymphatic temperament. Professor Chaveau, of Lyons, drew attention to the predominance of glandular over other forms of tuberculosis in young animals. In animals, as in man, in fact tuberculosis "has a manifest affinity for the lymphatic glandular system." Hence we find experimentalists, veterinarian or medical, describing as among the organs which become the seat of artificially-produced tubercular lesions the bronchial and prepectoral glands (Villemin); mesaraic and epigastric glands (Böllinger); intestinal, cervical, superficial (cutaneous), and other glands.

Of the instances or illustrations of the forms in which tuberculosis is artificially produced in the lower animals, none is perhaps of higher interest to man than its origin in the use of contaminated milk—of the milk of phthisical cows; because such generation of tuberculosis is not confined to the lower animals, but extends also, and probably on a scale of which at present we have no adequate idea, to the human

infant. To this source indeed (the use of the milk of phthisical cows) I believe a considerable proportion of infantile mortality in our large towns is attributable. Klebs, for instance, artificially produced tuberculosis by the milk of diseased animals; in the dog by the milk of cows in the last stage of phthisis. He found the serum of the milk quite as infectious as the milk itself. He concludes from his experiments that what he calls "the virus of tuberculosis" is present in the milk of phthisical cows, as well—and this is all-important—as in that of human mothers or nurses who are phthisical. The dangerousness of phthisical milk does not arise solely from its infective property, but also from its deficiency in the nutrient materials of healthy milk. Hence the liability of such milk to produce diarrhea in the human infant. Zürn, of Jena, produced tuberculosis in pigs by feeding them with the milk of a phthisical cow. In the hands of Böllinger also, the ingestion of the milk of tuberculous cows was successful in the artificial production of tuberculosis in pigs and rabbits.

Perhaps not second in importance to milk is the meat (or flesh) of phthisical animals as a means of producing tuberculosis, general or localized, in other animals feeding on it. The danger to man himself is quite as great from the use of phthisical ox-flesh as of phthisical cow's milk. Böllinger, of Zurich, produced tuberculosis in the pig by the ingestion of the flesh of phthisical oxen, and this whether their phthisis had occurred naturally or had been generated experimentally.

SUPERSTITIOUS CURES IN IRELAND.—J. W. Martin, in *Medical Press and Circular*:

For Scrofulous Ulcers—The ointment of the scrofularia nodosa, also of great repute in the cure of "burnt holes," pemphigus.

Jaundice—The patient's own urine.

As a Styptic in Bleeding Wounds—Pig-dung.

As a Poultice for Abscess—Cow-dung.

In these parts the infallible remedy for

shingles, or herpes zoster, is the application of a few drops of blood taken from any member of the family of Cahills.

Ricketts—The application of the hand of a seventh son.

A family in the adjoining part of the county Kilkenny, named Brennan, has had bone-setters among them for considerably over a century. They are supposed to inherit the power of setting bones as a special gift; and one member, who refused to exercise his gift, having been killed accidentally, was looked on as having suffered punishment from Providence for having refused to exercise his gift. Not leaving a son, his daughters, though making no pretense to any surgical powers, are afraid to send away applicants who come to them with sprain, strain, and other injuries, without some exercise of this gift, and accordingly tie on bandages, adding some small prayer—I believe, a Pater Noster and Ave Maria.

I knew one man who applied parings of his toe-nail to eyelids for ulcer of the cornea.

Snail-broth used to be freely taken for phthisis, but the present generation do not seem to appreciate it.

The scrapings of the bottom of an iron pot in frequent use is taken for colic, I am told, with wonderfully good effect.

THE "USES" OF PAIN.—London Lancet: The question is often asked: "What is the use of pain? It is scarcely conceivable that the infliction has no object." There are obviously two aspects of this question: in one science has an immediate interest; with the other it has a secondary but not unimportant concern. The first is essentially physical. What useful purpose does pain subserve in the animal economy? The answer is thrust upon us by daily observation and experience. There are two sentinels posted, so to say, about the organism to protect it alike from the assaults of enemies without and exacting friends within. The first of these guardians is the sense of *fatigue*. When this speaks there is need of rest for repair.

If the monitor be unheeded, exhaustion may supervene; or, before that point of injury is reached, the second guardian will perhaps interpose for the vital protection—namely, *pain*. The sense of pain, however, is more directly significant of injury to structure, active or threatened, than an excessive strain on function, although in the case of the vital organs pain occurs whenever the pressure is great. Speaking generally, it may be set down as an axiom that whatever collateral uses pain may subserve, its chief and most obvious service to humanity is as a deterrent and warning sensation to ward off danger. It is worthy of note, though sufficiently familiar to medical observers, that the absence of this subjective symptom in cases of severe injury is too often indicative of an injury beyond repair. The extinction of pain is not the highest, although it may be a generous impulse. If there were no guardian sensibility of this nature, it would be impossible to live long in the world without self-inflicting the most formidable injuries. That pain, in the second place, has an educational value, as regards the mind and temper, no one can doubt. Some forms of pain would seem to be chiefly intended for this purpose; but even in this view pain has a practical interest, because the higher development of the mind which controls the body, and of which the brain is the formative organ, is a process of physico-mental interest governed by natural laws of which science is perfectly competent to take cognizance. The subject as a whole is one with which the physician and physiologist have much concern.

"WHAT AM I?"—London Doctor: "What am I?" is the title of a valedictory address to the medical graduates of the University of Louisville, which has been published by request, and which we have been pleased with the opportunity of reading. The lecturer, Dr. J. M. Bodine, touches on some of the great problems of thought, and shows how inadequate is mere medical or scientific training to cope with them. He commends—wisely, we think—the study of

logic, and points out some of the temptations to which medical men are peculiarly exposed. He repudiates the notion that there is no immortality for man. While he finds the aspect of the brute creation one of happiness, he sees how different is the experience of man, and argues that if we have no future, "of all God's creation the grandest figure is the meanest." He touches on the mystery of pain, but this it is impossible to elucidate in a lecture. He has no fear of the Darwinian theory, nor does he see that it overturns religion, but he puts it on a different level to many. He sees in Nature the finger of God, and, in reply to many objections, says, "The Great Physician of Souls, against whose system the mighty men of philosophy, science, and historical criticism set themselves, stands still the central figure of time, while the challenge rings out over the fields of investigation as clear and clarion-toned as when it pealed like a trumpet of doom in the ear of perplexed Pilate—'What will you do with Christ?'"

THE CARE OF CHILDREN BY "SECULARISTS."—Lond. Lancet: It is impossible not to feel that a recent decision of the Master of the Rolls, by which the care of a young girl was withdrawn from a "secularist," has the full justification of public prudence and moral propriety. The human character is incomplete without a due development of the moral instinct, and this can only be secured by religious teaching. It is not so much a question of the form that teaching ought to take, as the fact that the religious principle, which undoubtedly forms an integral part of the human mind, as normally constituted, is recognized. Atheism is not alone to be considered as unbelief or infidelity, it is an abnormal *state*. There must be something at fault in the mental organism which can recognize no moral influences beyond those of its own creation. The mind that has become so absorbed with its own inner experience, and grown so exclusive and dogmatic as to deny the existence of any thing and every thing it does not

immediately perceive is essentially unfit to act as a trainer of other minds. It is, indeed, an open question whether an intellectual development so stunted as the simply "secularist's" is fit to be trusted with its own control. The recognition a purely materialistic philosophy and a secular "religion" had received in unexpected quarters during the last third of a century happily gives some tokens of being on the wane. It would be interesting, if it were possible, to ascertain precisely what share false methods of thought, depriving the mind of its greatest and, in some extremities, *only* resource—hope outside human nature—may have had in producing the state and deeds that lead to men and women being locked up in lunatic asylums! It is the fashion to ascribe a very large proportion of the insanity of the day to drink; perhaps, if the facts were more closely investigated, a still greater percentage of cases might be traced to the utterly spiritless and helpless condition that results from the creation of a great black wall round the field of vision where Nature has left a cloudless horizon—which religion scans with hope. If young minds are left to be trained by those who have extinguished, or are devoid of, the religious instinct, the blind will lead the blind, and society will reap the penalty in some of the divers forms of avoidable evil it has at present equal cause to regret and resent.

INFANTILE MORTALITY IN HOLLAND.—In a remarkable work by Dr. Van Houten (*Bijdragen tot den Strijd.*) is the following: "It requires remark that the most fruitful marriages are in those provinces where the mortality of children is highest, Zeeland and South Holland, where, according to the tables, from 1860–69, of 10,000 children, of the age from birth to one year, from 3,164 to 3,352 die yearly; the least fruitful are Friesland and Drenthe, where the mortality of 10,000 living children was only 1,603 to 1,340. The fruitfulness of the marriages, which fills up the victims in their first year

by new births, is thus an unfavorable phenomenon, and in no ways a proof of greater increase in population. Probably the cause lies in the non-suckling of the children by their mothers, who work out of doors. A medical journal lately gave a very distressing picture of the effect of field-work upon the part of the mothers in causing sickness and death among their infants."—*London Doctor.*

LIFE AND DEATH.—*London Lancet:* The "improvement" which consists in employing disused burial-grounds as gardens for the public advantage is progressing, though not so rapidly as we could desire. A recent meeting, attended by the Hon and Rev. W. H. Freemantle, Dr. B. W. Richardson, Prof. Mark, Rev. Harry Jones, Dr. Hardwicke, and others, resolved to promote the conversion of the old yards in Paddington Street to this sensible service. Our warm sympathy is with those who are urging the adoption of these measures. The two-fold advantage of getting rid of burial-grounds in populous districts, and substituting something more cheerful for the lugubrious spectacle of dilapidated tombs and headstones, and of securing special places for the use of poor children, who need space for healthful recreation, must secure the approval and as far as possible the co-operation of all who can help in this matter, which involves no disrespect to the memory of the dead, while it bestows some thought on the happiness and health of the living.

BRAIN-FEEDING.—*London Lancet:* We are glad to find some small tokens that the need of "brain-feeding" is beginning to be recognized by the lay public. For example, it is at length perceived that to perform intellectual work thoroughly men must be supplied with fresh air. This scrap of wisdom has been excogitated in connection with the controversy about the ventilation of courts of justice. It is not unreasonable to anticipate that in process of time it may dawn on the consciousness of ordinary thinkers that

just as muscle is fed and trained for physical exercise, so brain needs to be prepared and sustained in mind-work. It has too long been the fashion to leave the nobler part of man's organization to struggle with its own peculiar difficulties and supply its special needs as chance might enable it. This policy of neglect was all very well while the strain upon brain-power and work was not relatively inordinate. So long as the brain endured no more than its share of the penalty of labor it might be left to pick up the nutriment it required from the common store supplied to the body as a whole. The faculty of self-repair in the brain was assumed to be equal to the needs of the organ, and in health it proved adequate to the task thrown upon it. Now, however, the equilibrium has been disturbed. The press of work and the strain of worry are so great in these days of hot haste and breathless enterprise that, except under conditions rarely established and maintained, the power of self-nourishment and repair in the mind-organ is not sufficiently strong to keep it in health. It follows that it must be fed and nourished by special design. An adequate supply of oxygen is the preliminary requirement. Then comes the question of food; and, whatever else may feed the brain, workers with this organ should be assured that alcohol will not sustain it. Alcoholization and oxygenation are directly antagonistic processes, and even if alcohol be food for the brain, the organ can not feed when the nutrient fluid circulating in its vessels is disabled from the task of conveying oxygen, which happens whenever spirit is present in more than very moderate proportions in the blood. The relief afforded by alcohol from the sense of depression produced by a lack of oxygen is therefore illusory. It is procured by over-stimulating an organ which is both exhausted and impaired.

URINE AS A MEDICINE.—The urine of various animals, especially the cow, is used in anasarca, urinary diseases, colic, jaundice, leprosy, etc., by the Hindus.

HE had an umbrella, which he hoisted in rain and shine; overcoats graded to the thermometric degrees. He knew to a dot when to change his flannel, and how close akin were damp feet to the grave. Learned was he in nitrogenous and non-nitrogenous foods. Bowels had he which he studied with hourly care. He made himself comfortable away from draughts, and others watched by his talk thereupon. He retired at ten with the mercury at sixty, and when he waked at seven his first glance was at the hygienic tube. Cold baths, coarse towels, cracked wheat, and constitutionals filled in his existence; and yet this man, who was an oracle upon health, and regulated his system like clockwork, did so for a dyspepsia, with which he lived and died.

THE TELEGRAPHIC DISEASE.—Onimus, in *Courrier Médical*, calls attention to this disease, somewhat analogous to, but much more severe than, writer's cramp. Morse's instrument is blamed for causing the greatest number of cases, probably because of the extremely close attention required in using it to avoid errors. The symptoms are chiefly palpitation, over-excitement, vertigo, insomnia, sometimes weakening of the sight, and a sensation of constriction at the nape of the neck. The over-excitement is succeeded by depression, sadness, and entire loss of tone. The patient loses memory; insanity even may follow. The symptoms are more readily produced in women than in men.—*Lond. Doc.*

"DR." NOEBLING, the man who attempted the life of the German Emperor, is a doctor of philosophy—not of medicine.

It now becomes the duty of the University-of-Michigan authorities to deal vigorously with the men who demanded the "thirty dollars" for the return of Devin's body. Prompt expulsion of the students implicated, and the promotion of the janitor to the *inside* of the vat which he cherished so pecuniarily, will be duly appreciated by the professional as well as the non-professional world.

RE-VACCINATION OF MEDICAL STUDENTS.—*Lond. Med. Examiner:* In consequence of the death of a young student from small-pox contracted at a Marseilles hospital, it is proposed that all students should be furnished with a certificate of re-vaccination before they are permitted to attend a public hospital. M. Gendrin has insisted for many years on the necessity of such a rule, but hitherto his advice has remained unheeded.

CONDUCT OF THE SURGEON IN CASES OF MUTILATION OF THE HAND.—*Prof. Verneuil (Cour. Méd.)* says, when you have to treat a patient suffering from a hand crushed in any way whatever, take as an absolute rule to cut away nothing, to regulate nothing with the bistoury. He gives the reasons for this, first, that parts which it would appear necessary to cut away at first, regain their shape and usefulness; and, secondly, that operations, performed two or three months after, when the parts are in a state of absolute calm, give much better results.—*London Doctor.*

MANIA metaphysica (Gräbel-sucht) is recognized as a new form of mental disease. It shows itself chiefly in young people in constant and useless inquiries into the why and wherefore of things. It is to be treated with small doses of bromide of potassium.—*London Med. Examiner.*

Selections.

The Action of Malaria and its Influence on the Spleen.—*John Sullivan, M. D., M. R. C. P., in London Med. Times and Gazette (Part II):*

Among the many very valuable contributions to medical science published by the justly celebrated Professor Baccelli, of Rome, none appears to me of more interest and importance than an essay read by him before the International Conference held in Geneva, 1877, On the Condition of the Spleen under Malaria, its Peculiar Venous Circulation, and its Special Function. The view of this special function of the spleen, as essential toward the process of digestion, taken by Professor Baccelli, although not exactly original, still, as based on the influence of malaria, is worthy of great consideration. Professor

Baccelli directs our attention to two notable facts connected with the digestive function of the stomach.

At the commencement of an attack of marsh fever we frequently observe that the patient has a voracious appetite, whereas when the action of malaria is repeated or continued, as in marsh cachexia, there is loss of appetite and an obstinate dyspepsia. In the first case the engorged and swollen spleen is soft, and the hyperæmia disappears altogether. In the second case the congested condition of the spleen is permanent, or varies but slightly. During the first few days the increase of appetite is conspicuous, and the dyspepsia which succeeds is ascribed by Baccelli, not to any increase of size in the neighboring organs, or to any pressure of the stomach impeding its movements, but rather to some chemical alteration in the process of digestion from an altered condition of the spleen.

Cachectic patients have a great aversion for nitrogenous albuminoid substances. If what is rejected be carefully examined by a lens, the fleshy fibers will be found unchanged, even although they have existed in the stomach two or three days. Baccelli is of opinion that the spleen, with its peculiar gastro-splenic circulation, has much to do with this perversion of taste, this longing after substances which do not require a great co-operation of the gastric juice in order to be utilized as food. He therefore arrives at the conclusion that the spleen, with its attendant short veins, is to the cells of the pepsine glands what the system of the vena portæ is to the cells of the hepatic glands.

The large curvature of the stomach is connected to the spleen by five or six straight venous canals; these intercommunicate by means of minute little veins, disposed vertically and obliquely behind them. The absence of valves and of any coercive contrivance enables the blood to move on in a double inverse current and to halt at a given moment either in the stomach, the spleen, or the intermediate vascular system. The veins which pass from the spleen to the stomach penetrate deeply, and the capillaries when injected unite in myriads, especially around the pepsine glands. All this special gastro-splenic venous circle opens into an angle formed by the splenic and left coronary vein. The vein thus formed by their junction passes downward, then ascends, and, after having been joined by several branches, empties itself into the trunk of the vena portæ as it enters into the liver. The pepsine glands abound in that part of the stomach toward which the veins converge, and appear to be connected exclusively with the venous system. *

Injections passed into the large and small venous tracts admirably illustrate the nature of this circle. Whenever an injection has been practiced at the junction of the left coronary and anterior splenic

vein, the *venæ breves* and their little branches were seen to be injected at one and the same time; and the fluid would have passed to the pyloric extremity of the stomach if it had not been prevented by a ligature. But if the injection was passed into one of the *venæ breves* it never took this course; it merely passed, if strong pressure were applied, into another *vena brevis*. Therefore the venous blood passes from the spleen to the capillaries of the stomach, from the capillaries of the stomach to the left coronary vein, from the capillaries of the spleen to the anterior splenic vein, and from the anterior splenic and left coronary vein into the main trunk, which opens into the *vena portæ*.

When the capillaries are well injected they are seen to wind round the pepsine glands exactly in the same way as the capillaries of the *vena portæ* wind round the clustered hepatic cells. You might fancy you were examining in the stomach with the aid of the microscope—examining the exact preparation practiced by the late Claude Bernard on the capillaries of the liver.

Carbon enters largely into the composition of pepsine; and this carbon must be derived from venous blood. It therefore would appear that one of the most important functions of the spleen is to supply to these glands, through the *venæ breves*, the elements best suited for the preparation of a material so essential toward the process of digestion.

Such being the case, we can understand how the various lesions of the spleen must give rise to various forms of dyspepsia. Although the absence of pepsine may not have an injurious effect upon such alimentary substances as do not need to be dissolved by the gastric juice, but merely to be submitted to the action of the saliva in order to be fitted to enter the circulation. The study of this gastro-splenic circulation not only illustrates the function of the spleen, but also furnishes a proof of the existence, according to Baccelli, of a small abdominal circulation, the function of which is antagonistic to that of the small pulmonary circulation. If you raise the stomach and disclose the pancreas in its entire extent, and draw it down, you will see the large vein which runs horizontally over it; this receives numerous subsidiary branches, and passes directly from the left side of the spleen. This vein is about half the size in diameter of the *vena cava*, and forms by its position almost two right angles with the vertebral column. It lies behind the stomach, has no valves, and is liable to be compressed when the stomach is distended. Now, all these wise arrangements are necessary in order to protect the vein from pressure against the vertebral column. The large vein having received some branches from the duodenum, runs on and forms part of the portal system. It therefore unites transversely the liver and the spleen as it

passes over the pancreas, and thus is completed the small abdominal circulation. The vein which is formed by the junction of the anterior splenic and left coronary vein enters the liver. This portion of the circle is connected with that which unites the liver, the pancreas, and the spleen, and so a complete venous circle is formed.

Thus Professor Baccelli is induced to teach that, in accordance with the laws of anatomy, physiology, and chemistry, there exists a small abdominal circulation, the function of which appears to be to utilize the hydrocarbon materials for the organs connected with it; in the same way as it is the function of the pulmonary circulation to eliminate superfluous hydrogen and carbon in order to fix the oxygen on which the quality of the blood depends, that it might be fitted for the office of combustion, or, to use the words of Baccelli, "of progressive oxidation of the elements on which rests the law of molecular changes and of the process of nutrition." If we examine the secretions special to the organs to which this venous circle is annexed, we find how large is the quantity of hydrocarbons they contain.

The pancreatic vein, as it passes between the liver and spleen, is exposed to pressure from its position between the vertebral column and the stomach when in a state of distension. But the spleen covers over one third of the pancreas anteriorly, which then dips down, and is situated posteriorly, and thus a mechanical contrivance of great interest is obtained to favor, and yet to protect from, pressure. This contrivance is well ordained in order to supply these organs with a copious supply of blood. The spleen becomes more congested, the better to supply the glands of the stomach through the *venæ breves*.

The pancreas remain stationary, the numerous venous canals are unable to open into the large vein, and the liver being incapable of receiving any blood from it, there will naturally accumulate the blood which it receives from the vein formed by the junction of the left coronary and anterior splenic veins; and thus the different organs become well supplied with blood for the performance of their different functions. When these offices are completed, then the pressure of the distended stomach upon the spleno-hepatic vein is diminished, and the circulation is equalized. This small abdominal circulation is intended to fix, in the above organs, all the hydrocarbonized materials required for their respective functions, just as the small thoracic circulation serves to eliminate certain chemical products, and fix the oxygen for the purification of the blood. In the liver, kidneys, and intestinal canal there is a depurative apparatus, formed as well from arteries as from veins, in which but a small proportion of hydrocarbons is formed, derived from venous blood only.

In this abdominal circle Baccelli does not include

the mesenteric and superior vena cava, as they properly belong to the system of the vena portæ; therefore, starting from the spleen, this circle may be divided into an anterior section connecting the stomach, spleen, and liver, and a posterior connecting the spleen, pancreas, and liver.

Such is an outline of what Professor Baccelli calls the "little abdominal circulation," which I have seen demonstrated by him on two occasions on the dead body in the hospital of Santo Spirito, in Rome, and of his views respecting the function of the spleen as necessary toward the process of digestion. From these views we are led to conclude that whatever cause may tend to impair the texture of the spleen will interfere with its peculiar function, destined to supply to the pepsine glands the materials required for their special secretion. Now, whereas the spleen is specially involved in the morbid process of malarial fever, so is dyspepsia most pronounced when, by the continued and persistent influence of malaria, the texture of the spleen becomes damaged; and in the changes which it undergoes by this action consist some of the essential characters of fever and ague. The reaction of the system against the infection of malaria generates a periodical non-inflammatory morbid process, the fundamental character of which is intermittence; and as this essential character of fever and ague has been defended and insisted upon by Torti, Lancisi, and former Italian writers, so it is in the present day by the no less distinguished Professor Baccelli, of Rome.

When the founders of medicine—Hippocrates, Celsus, Galenus, etc.—defined marsh fever to be intermittent, these profound interpreters of nature must have been guided by their vast powers of observation and experience; and if malarial fever be essentially intermittent by its nature, it can not be remittent or continued. Still this intermittence may be obscured and masked, and the fever may take on the semblance of remittent or continued, but it is only sub-continued or pseudo-continued.

The paroxysms which mark intermittence may run one into the other, one scarcely ending before another begins; or, again, the sub-continued form may arise from an increase in the number of paroxysms in a given time; or, again, an intermittent may acquire an apparent continuity by the extension of the paroxysms, so that if a paroxysm of fever be longer than usual, the cold stage of the next access will interrupt or overtake the sweating stage of the preceding one. Thus intermittence may be interrupted or obscured by reason of the intensity or the degree of the poison, by some peculiarity in the individual constitution, or by the complication of some vital organ influenced by climate, locality, and season of the year.

The different modes and combinations in the ad-

ministration of quinine in the hospitals in Rome depend on the nature of the malarial complication. Arsenic and camphor are considered to be capable of counteracting the paralyzed condition of the ganglionic nervous system; iron, as well as quinine, is useful for the restoration of the red corpuscles of the blood.

In some autumnal malarial fevers, Prof. Baccelli recommends to an acid solution of quinine the addition of ferri pot. tart. and of arsenious acid. In the pneumonic form of malarial fever he prescribes quinine, with some mild preparation of antimony with camphor and henbane. But in the treatment of a disease which manifests itself under forms so varied and so treacherous, much will depend upon the judgment and experience of the physician.

The British Islands are providentially free from the many pernicious forms of marsh fever. However, when we reflect how malaria in its worst forms rages in many countries in Europe, in the East and West Indies, in the Northern and Southern States of America; how the records of the medical history of the late civil war in America demonstrate that there occurred in the army, of malarial diseases alone, near upon 1,500,000 cases, with more than 46,000 deaths, we can not fail in arriving at the conclusion that *the study of malarial disease, both as to its origin, its nature, and its treatment, should be regarded as a duty of the utmost importance.*

Successful Case of Transfusion.—G. C. Stacpoole, of New Zealand, in London Lancet: Mrs. C., aged thirty-five, lying-in with her seventh child, suffered for the second time from placenta prævia. The first occurred in her third confinement. This time she had been attended by a midwife, and on November 4th I was summoned, soon after an immense gush of blood had left her in a most exhausted condition. On examination I found the placenta centrally placed, os uteri the size of a half-crown and not dilatable, and the membranes not ruptured. I immediately plugged, and ventured on chloroform, and an hour and a half after my son, Mr. C. Stacpoole, of Dunedin, turned and delivered her of a dead child. The uterus contracted well, and as she lost no blood after delivery we hoped she would rally. I assiduously watched the case, but was disappointed in finding that she could keep down neither nourishment nor stimulants, and twelve hours after delivery we came to the conclusion that transfusion alone would give her a chance of recovery. Her pulse was nearly imperceptible; the palpebral conjunctivæ and lips colorless; the skin cold and pallid; the flesh soft and woolly; the respiration gasping and shallow; she constantly flung her arms about, and felt even on the verge of syncope—in fact, she was to all appearances dying. We determined to follow the plan described

by Dr. Beatty. Her husband supplied the blood, and seven ounces were drawn off into a bowl floating in hot water; the blood was stirred briskly during its flow by a glass rod, and afterward strained through muslin, and much fibrin separated; a few drops of liquor ammonia were added. This was done in an outer room. The patient had a plump, smooth arm, and no vein could be traced, but I thought I felt one in the situation of the median basilic. Mr. C. Stacpoole pinched up a portion of skin at the bend of the left elbow, and ran a small bistoury through it, leaving a wide wound, which displayed only a layer of fat. He then carefully dissected where we expected to find the median basilic, and after a little time came to a flat glistening something, which proved to be a small vein, and the only one brought into view during the operation. No flow could be seen through this, and the great difficulty was to separate the anterior coat without transfixing the vein. He first passed a small director under the vein, and then, seizing the anterior coat with a dissecting forceps, he made a small incision with a tenotomy knife above the director. A slight welling of blood obscured the cut, but was immediately controlled. In the meantime the bowl of blood had been kept floating in hot water during this somewhat tedious operation. It was then brought to the bedside, and my son inserted Aveling's silver afferent tube into the vein, and into that the stop-cock with about an inch of the gutta-percha tube. I then held a common glass syringe, containing an ounce, nozzle down, in the blood, and, when filled, reversed it to be sure no air was in the reservoir. This was inserted into the gutta-percha tube, the stop-cock turned, and the blood slowly injected, and this was repeated until the blood was exhausted, each time of withdrawal taking care to close the stop-cock and leave the tube filled with blood. The relief to our patient was almost immediate. The lips reddened, the face lost its ghastly hue, the gasping respiration and the dread of syncope ceased, the pulse returned, and within half an hour she turned on her side and thanked her well-satisfied attendants. From this time she retained both food and stimulants, and up to this day (May 14th) she has improved without drawback.

Rupture of the Uterus.—London Lancet: At a recent meeting of the Obstetrical Society three cases of rupture of the uterus were read, which are of considerable interest as illustrating some of the ways in which this accident may happen. The first was communicated by Mr. Marshall, of Colney Hatch. The patient was a multipara at the full term. The labor was lingering, and the breech presented. Uterine pains were throughout slight, and delivery was effected by pulling down the breech by hooking

the finger in the groin. The pelvis was roomy, and no difficulty was experienced in effecting the delivery. Some hours before the birth of the child the patient complained of a sharp pain in the lower abdomen, and soon afterward the face, upper limbs, and trunk became greatly swollen with emphysema. Death took place shortly after the child was born.

The second case occurred in the practice of Dr. Skinner, of Sheffield. The subject was a woman, twenty-three years of age, who had had one child. In the third month of her second pregnancy she experienced sudden pain in the abdomen, and died in two hours without external hemorrhage. On examination of the body a small fœtus was found in the cavity of the belly, and portions of the membranes and placenta projected into that cavity, the rest being still in the cavity of the uterus. It would be well to have had a more full and detailed account of the appearances found after death in this case than was offered at the meeting, with a view to settle finally whether it was really a case of intra-uterine or one of interstitial pregnancy. The rupture appeared to have taken place spontaneously, and the history of the case supplied no clue to its cause. In neither of these cases was the seat of rupture examined microscopically with a view to discover the condition of the uterine tissues at the seat of rupture.

The third case was communicated by Dr. Hickinbotham, of Birmingham. A patient, aged thirty-two, in the ninth month of pregnancy fell on a chair. This was followed by such profuse hemorrhage that she became blanched and pulseless. The blood was found to come from a rent in the posterior wall of the uterus, which admitted two fingers, situated about an inch behind the os uteri. The os was not dilated. The rent was plugged by means of a sponge, and the bleeding was by this means checked. Labor set in two days subsequent to the accident, and the patient made a good though slow recovery.

Transfusion in Anæmia.—Prof. Bitot, of Bordeaux, relates (*Union Méd.*) eight cases of transfusion performed on four persons with success by an improved apparatus which he describes. He attaches great importance to endeavoring to prevent the shivering occurring after the operation (which he regards as a true febrile paroxysm) by the administration of quinine. He terminates his paper with these conclusions: 1. Transfusion may prove a sovereign remedy in cases of anæmia caused by hemorrhages independent of cancer. 2. It may prove very useful in cases of physical degeneration caused by hyperæmia. 3. It is rather mischievous than useful in disorders of a cancerous nature. 4. It is very prudent to administer quinine to the patient two days prior to the operation.